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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,765	03/22/2004	Michael Platte	2924	1253
7590 09/20/2006 STRIKER, STRIKER & STENBY 103 East Neck Road Huntington, NY 11743			EXAMINER ABOAGYE, MICHAEL	
			ART UNIT	PAPER NUMBER

1725

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/805,765

Applicant(s)

PLATTE ET AL.

Examiner

Michael Aboagye

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 15-17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Vogt (US Patent no. 6,414,260).

Vogt discloses a holding device for holding electrodes for resistance welding, comprising: an electrode arm, a connecting element (6) for connecting and/or fixing an electrode with an electrode arm of a welding apparatus; said connecting element comprising: a base body and a sensor (48) selected from the group consisting of a sensor for introducing and receiving ultrasound waves into an electrode; said sensor a sensor disposed at an end side and arranged in a recess on a base body of the connecting element and mounted in the connecting element such that it is in contact with the end side of the electrode. Note also that the sensor is considered as being cylindrical in shape (Fig.1 and 2, column 3, line 58 – column 4, lines 1- 29 and column 5, lines 1-17); said holding device further comprising a second electrode arm with a second connecting element, formed so that a sensor for introducing ultrasound waves into an electrode is arranged in one of said connecting elements and a sensor for

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receiving ultrasound waves is arranged in another of said connecting elements (column 3, lines 27 – 57).

Vogt shows a holding device wherein the electrode arm has a diameter, which is greater than a diameter of the electrode, said electrode arm being provided at an end side with an opening for receiving a portion of the electrode (Fig.1; column 5, lines 1- 24).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 1, 4, 5, 7-10, 13, 14 and 15- 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior art (AAPA) in view of Vogt (US Patent no. 6,414,260).

Regarding claim 1, AAPA (figures 1-4) discloses the claimed features: a connecting element for connecting and/or fixing an electrode with an electrode arm of a welding apparatus, comprising a base body; and a sensor selected from the group consisting of a sensor for introducing ultrasound waves into an electrode, a sensor for receiving ultrasound waves or both, wherein the connecting element is formed as a clamping element which is connectable (by screws 51,52, figure 4) with the electrode arm "15" so that it fixes the electrode in a clamping seat (note, the electrode arm has a surface to receive the electrode during clamping, attention is further drawn to the applicants' specification page 22, line 5-10, which discloses the corresponding features between Figure 4 (prior art ) and figure 5).

Regarding claims 4 and 5; note that AAPA (figure 1-3) discloses the claimed features: a connecting element "12' With a sensor "13" arranged on the base body in a recess of said base body, the connecting element is composed of a material which has same or substantially similar acoustic properties as a material of the electrode, and a sensor selected from the group consisting of a sensor for introducing ultrasound waves into an electrode, a sensor for receiving ultrasound waves, and both.

Regarding claims 7-9, AAPA (figure 4) discloses the claimed features: a clamping element has an inner contour which corresponds to an outer contour of the electrode; and further comprising screw means for connecting the clamping element

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with a counter plate "17" which is formed as a collar-shaped extension of said electrode arm; wherein said counter plate is formed as one piece with said electrode arm; (specification, page 19 – 22, and Figures 1 and 4).

Regarding claim 10, note said ultrasound device disclosed by AAPA has a piezo element to generate the ultrasound waves as inherent in ultrasonic sensors.

AAPA shows a holding device for holding electrodes for resistance welding, comprising an electrode arm; and a connecting element that is connected with said electrode arm, said connecting element including a base body,

Regarding claims 15- 21, AAPA shows a holding further comprising a second electrode arm with a second connecting element, formed so that a sensor for introducing ultrasound waves into an electrode is arranged in one of said connecting elements and a sensor for receiving ultrasound waves is arranged in another of said connecting elements, wherein said electrode arm has a diameter which is greater than a diameter of the electrode, said electrode arm being provided at an end side with an opening for receiving a portion of the electrode, said connecting element is connectable for clamping of the electrode by screw means, wherein said connecting element has an opening, said sensor being cylinder-shaped and mounted in said opening of said connecting element, and also being in contact with an end side of said electrode (specification, page 19 – 22, and Fig.1- 4).

AAPA does not expressly teach a sensor disposed at an end side of said connecting element facing an electrode arm.

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However Vogt shows a sensor disposed at an end side of said connecting element facing an electrode arm as in paragraph 2 above to protect the sensor against mechanical damage (see, Vogt, column 6, lines 51-55). Vogt further teaches Vogt teaches a development which provides the sensor with a sound influencing medium in a way as to avoid undesirable reflection or damping of the ultrasonic waves (column 3, line 28 – column 4, line 52).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have modified the apparatus of AAPA with the a sensor disposed at an end side of said connecting element facing an electrode arm as taught by Vogt in order to protect the sensor against mechanical damage (see, Vogt, column 6, lines 51-55).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior art (AAPA) in view of Vogt (US Patent no. 6,414,260) and Waschies (US Patent no. 5,920,014).

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Applicants' admitted prior art (AAPA) in view of Vogt discloses all the elements of claim 1. AAPA in view of Vogt teach a sensor for introducing and/ or receiving of ultrasound waves into an electrode but not specifically that the wave group consists of transverse ultrasound waves, shear waves or torsion waves.

However Waschkies teaches a process for assessing welding joints using sensors wherein said sensor is a sensor for introducing and/or receiving of ultrasound waves selected from the group consisting of transverse ultrasound waves, shear waves and torsion waves, having frequency smaller than 1Mhz. Waschkies further teaches that the ultrasound waves are introduced into the electrode in an orientation selected from the group consisting of an orientation substantially parallel to a longitudinal axis of the electrode and an angle smaller than  $90^{\circ}$  to a Longitudinal axis of the electrode. (Column 5, line 61- column 7, line 63).

It would have been obvious to one of ordinary skill in the art at the time invention was made to utilize shear waves and in particular transverse waves or torsion waves in AAPA connecting element as modified by Vogt in view of Waschkies to achieve good propagation behavior of the sound waves in the electrode for sonic inspection (Waschkies; column 7, lines 24- 49).

### ***Response to Arguments***

8. The examiner acknowledges the applicants' amendments received by the USPTO on July 07, 2006. Claims 1-5 and 7-21 remain under consideration in the application.



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9. Applicants' argument filed July 07, 2006 have been fully considered but they are not persuasive. The examiner respectfully disagrees with the applicants' characterization of Vogt electrode holder (connecting element "6") as an electrode arm. The examiner maintains that figure 1 distinctly shows three major features namely: the electrode, the electrode holder and the third segment (the electrode arm), these three segments are related such that the electrode holder (connecting element) connects the electrode shaft to the electrode arm and having the ultrasonic sensor disposed in a recess of the base body of the connecting element (see column 3, lines 27-39 and column 4, lines 1-6). The limitation calling for a sensor disposed at an end side of said connecting element facing an electrode arm, as in amended claim 1 does not on its merit present a patentable distinct feature not taught by Vogt. The examiner interprets these limitations as having the sensor at the base of the connecting element and intermediate between the connecting element and the electrode arm. These structural limitations are met by Vogt (figure 1). The applicant also assert that AAPA does teach a connecting element mounted between an electrode arm, and also a connecting element formed as a clamping element which is connectable with the electrode arm so that it fixes the electrode in a clamping seat. IT should be noted that AAPA discloses figures 1-4 which as a combined teaching shows these structural features. The applicant seems to have relied only on figure I of AAPA in his argument, which the examiner respectfully disagrees.

The examiner maintains that, AAPA shows a connecting element "16" formed as a clamp which is connectable with the electrode arm so that it fixes the electrode in a

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clamping seat (see, AAPA figure 4); AAPA further shows an ultrasound sensor deposited in a recess of a attachment element of the electrode shaft (see AAPA figure 1).

Claims 15-17 and 21 therefore remains rejected under 35 U.S.C. 102(b) as being anticipated by Vogt (US Patent no. 6,414,260); Claims 1, 4, 5, 7-10, 13, 14 and 15- 21 are deemed rejected by the combination of (AAPA) in view of Vogt (US Patent no. 6,414,260) and Claims 2, 3, 11 and 12 are rejected by (AAPA) in view of Vogt (US Patent no. 6,414,260) and Waschkies (US Patent no. 5,920,014).

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Aboagye whose telephone number is 571-272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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09/13/2006

KEVIN KERNS *Kevin Kerns 9/15/06*  
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